

Emerging Technology and Mobility Options in City Right-of-Way



Statement of Legislative Intent 35-3-A-1

1. A survey of anticipated new mobility options like scooters, “transit pods,” and other non-motorized vehicles, that may be coming to Seattle in the next three to five years;
2. An evaluation of other cities’ efforts to address these emerging private transportation investments; and
3. A strategy to integrate these options into the transportation network in a safe and sustainable manner, including the possibility of utilizing bike lanes for these modes of transportation.

Guiding Principles

- Put people and safety first
- Design for customer dignity and happiness
- Advance race and social justice
- Forge a clean mobility future
- Keep an even playing field
- Maximize public benefits
- Be responsible stewards of public resources

Potential Benefits of Emerging Mobility

We can...

- accommodate growth without increasing congestion
- enable more transportation options
- build a more responsive transportation system
- create a more equitable transportation system
- have a safer and greener transportation system

Potential Risks of Emerging Mobility

We could...

- have more congestion and more pollution
- have more inequity
- erode support and resources for public transit
- disrupt the economy and lose jobs faster than innovation creates them
- have a system we don't understand, can't manage, and can't protect

Emerging Mobility Options

Included in SLI Response

- E-bike and e-trike
- E-scooter
- Electric personal assistive mobility device (EPAMD)
- Personal delivery device (PDD)
- Automated transit pod

Not included

- Carsharing
- Ride-hailing
- On-demand micro-transit
- Aerial drone

E-bike



Success of Bikeshare

- 2 million rides last year
- Mayor Durkan made bike share permanent in 2018
- Changes made based on pilot lessons:
 - Expanded citywide coverage
 - Increased access to address equity (e.g., payment options)
 - Improved bike parking management requirements
 - Increased bike parking capacity
- Over 400k trips through April in 2019



E-trike for Sharing



E-trike for Delivery



E-scooter



Electric Personal Assistive Mobility Device (EPAMD)



Hoverboard



Uni-wheel



Onewheel

Personal Delivery Device (PDD)



Transit Pod and Delivery Shuttle



Device Ownership Models

DEVICE	PRIVATE/PERSONAL	SHARED	COMMERCIAL FLEET (NOT SHARED)
E-bicycle	✓	✓	✓
E-tricycle	✓	✓	✓
E-scooter	✓	✓	
E-skateboard	✓		
EPAMDs (hoverboards, uni-wheels, and onewheels)	✓		
Personal delivery device/ delivery robot			✓
Automated transit pod			✓

Use of ROW in Seattle

DEVICE	TOP SPEED	ALLOWED			
		SIDEWALK	BIKE LANE	ROADWAY	MULTI-USE TRAIL
E-bike, Class 1	20 mph	✓	✓	✓	✓
E-bike, Class 2	20 mph	✓	✓	✓	✓
E-bike, Class 3	28 mph		✓	✓	
E-trike	20 mph	Same as e-bikes classes under state and local code			
E-scooter	20 mph			✓	
E-skateboard	20 mph	✓			
Electric Personal Assistive Mobility Device (EPAMD)	20-25 mph	✓		✓	
Personal Delivery Device (PDD) or Delivery Robot	6 mph	✓			
Automated Transit Pod	25 mph			✓	



State of Practice: Experimentation

- Determine if, where, and how devices should be ridden and parked
- Make necessary code updates
- Develop pilot programs

Learnings from Other Cities

- No comprehensive road map
- Establish clear definitions and guiding principles
- Pilot programs
- Engage the community
- Gather data
- Clearly define *where* to operate
- Clearly define *how* devices may operate
- Manage parking clutter
- Provide education and enforcement



Summary of Potential Next Steps

- Pilot programs (e-scooter pilot in development)
- Policy and legal framework upgrade
- Education and enforcement
- Data collection and analysis
- Design standards and right-of-way allocation

E-scooter Pilot Program Principles (Planned Action)

- Safety
- Fairness to riders
- Protection of the City (and taxpayers) through full indemnification
- Equity



E-scooter Pilot Program Development

Safety is first and foremost:

- Incorporate best safety practices from other cities
- Define helmet requirements
- Create education campaign
 - How to properly ride a scooter
 - Rules of the road



Example: Education Campaign



E-scooter Pilot Program Development (cont.)

- Engage community to help shape pilot
- Determine where and how to:
 - Ride and at what speeds
 - Park
 - Collect data
- Require full indemnification provisions
- Establish fines and enforcement
- Define minimum threshold for remaining shared bikes

Other Potential Next Steps

Policy and Legal Framework Upgrade

- Review and upgrade regulations
- Refresh City's existing principles
- Define where devices can operate and park
- Revisit modal priority to inform regulations
 - Operate in bike lane?
 - Evaluate based on safe speeds



Education and Enforcement

- Wayfinding and signage
- Training and education of enforcement authorities
 - Police
 - Street ambassadors
 - Other partner agencies and organizations

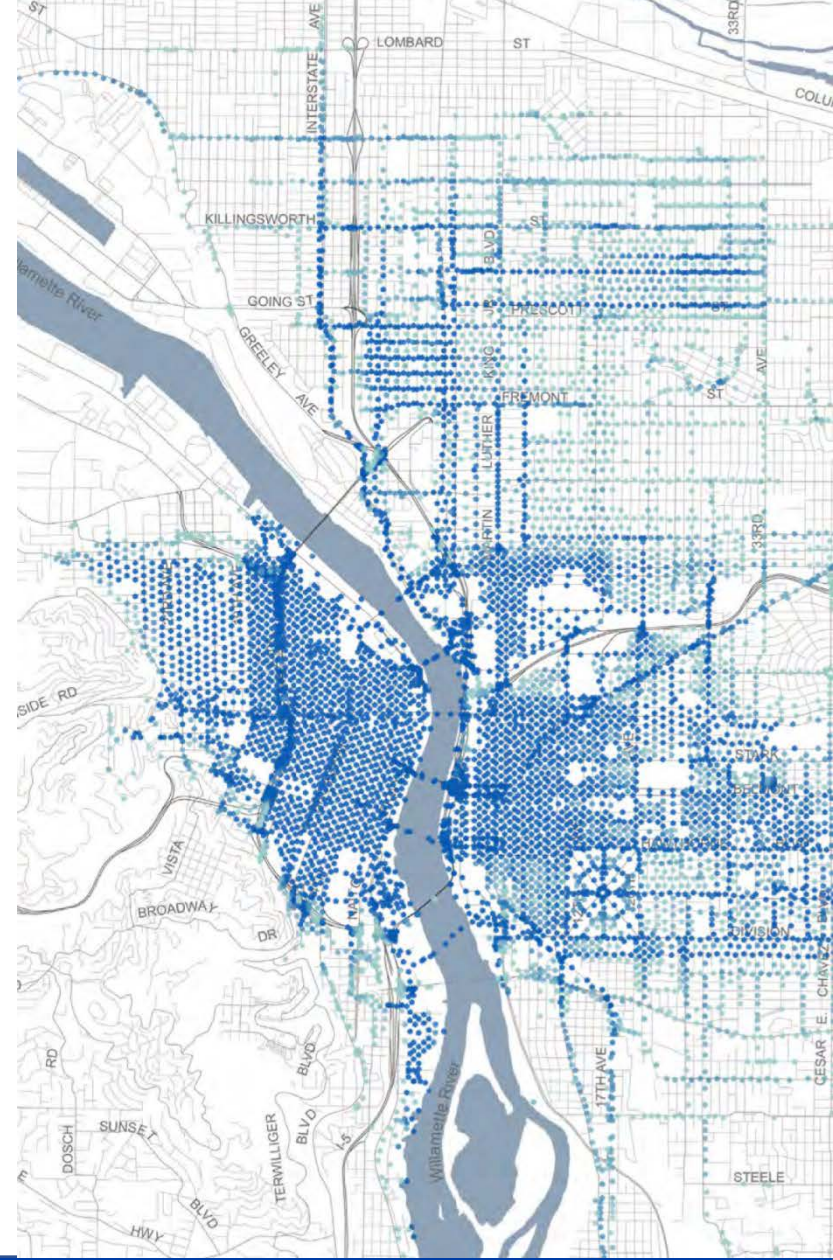


Potential to adapt a variation of the trail courtesy sign for ROW

Data Collection and Analysis

- Establish baseline usage to help inform policy decisions
- Require data as part of any pilot
 - Commercial services
 - Private vehicles

E-scooter data from 2018 pilot in Portland



Design Standards and Right-of-Way Allocation

- Consider designation of low-intensity travel lanes in strategic locations
- Integrate emerging mobility devices into street design guidelines
- Manage the sidewalk
- Provide marked parking space or zones



Questions?

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